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Patent and Trademark Office**

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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.
09/358,177	07/20/99	LI	Y SPIN98-01PA

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EXAMINER

PATIDAR, J

ART UNIT

PAPER NUMBER

2862

DATE MAILED: 02/23/01

**Please find below and/or attached an Office communication concerning this application or proceeding.**

**Commissioner of Patents and Trademarks**

**Office Action Summary**

Application No.

09/358,177

Applicant(s)

LI ET AL.

Examiner

Jay M. Patidar

Art Unit

2862

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-22 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-22 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claims \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are objected to by the Examiner.
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. § 119**

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).

**Attachment(s)**

- 15) ☒ Notice of References Cited (PTO-892)
- 16) ☒ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 17) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 18) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 19) ☐ Notice of Informal Patent Application (PTO-152)
- 20) ☐ Other:

1. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

2. This application has been filed with informal drawings which are acceptable for examination purposes only. Formal drawings will be required when the application is allowed.

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, a few alternating layers (claim 1) must be shown or the feature(s) canceled from the claim(s).

No new matter should be entered.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1-22 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In all claims, "magnetorestrictive" should be ---magnetostrictive--- for consistency.

In claims 1,2,3, it is vague as to what is meant by the term "few"; the structure as claimed is not incomplete (claim 1); The structure which goes to make up the device must be clearly and positively specified. The structure must be organized and correlated in such a manner as to present a complete operative device.

In claim 2, it is unclear as to what is "cantilevered layers";

In claim 3, it is vague as to how a magnetostrictive substrate has a plurality of piezoelectric layers on the substrate;

In claim 4, "magneto restrictive" should be ---magnetorestrictive---;

In claim 5, "piezo electric" should be ---piezoelectric---;

In claim 6, how rotor movement is detected; what consists of sensor; how sensor has magnetorestrictive and piezoelectric materials; where are these materials located;

In claim 7, how the system is used to detect the flow speed; the structure is not clearly defined;

In claims 8,22, "about" renders the claim indefinite; what does "about one layer" mean; what generates magnetic field;

In claim 9, claim 8 recites one layer; two layers being claimed in claims 9,10;

In claim 11, it is unclear as to how an electric current is measured; what carries electric current;

In claim 12, "area of the sensor" is not clearly defined; what is an area of the sensor? What is a high impedance readout circuit and where is it located;

In claims 13,14,20, what generates magnetic field;

In claim 16, what is "patterned stripe of electrically insulating piezoelectric material";

The claims not specifically addressed share the indefiniteness as they depend from rejected base claims.

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4,8,9,10,14-17,20,22 are rejected under 35 U.S.C. 102(b) as being anticipated by GB 2188157 or Kinsner et al. (3,909,809).

Kinsner and GB disclose a magnetic field sensing device with magnetostrictive layer and piezoelectric layer (Note whole document).

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 5-7,11-13,18,19,21 are rejected under 35 U.S.C. 103(a) as being unpatentable over GB 2188157 or Kinsner et al.

Kinsner and '157 do not specifically teach the use of the device for rotary movement detection, current measurement, a magnetic random access memory, however, it would have been obvious to one having ordinary skill in the art at the time the invention was made to use a magnetic field sensing device for any intended purpose, since it has been held to be within the general skill of an artisan in the art to use such sensor on the basis of its suitability for the intended use as a matter of obvious design selection. Furthermore, this feature in the claims is considered a statement of an intended use and lends no patentable weight to the claims. The shape of the piezoelectric material/layer (claim 18) is considered a matter of design selection. The ferrite material for magnetostrictive layer is old and known in the art.

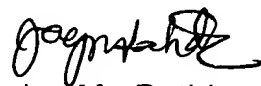
As to claim 12, it is clear from the disclosure of both references that the sensitivity of the sensor is dependent on the area of the layers.

As to claim 13, supporting the sensor as a cantilever is considered a matter of design selection since it has been held that the provision of adjustability/suitability, where needed, involves only routine skill in the art.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jay M. Patidar whose telephone number is 703-308-6723. The examiner can normally be reached on M-Thur 7:00-5:30.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christine Oda can be reached on 703-305-4908. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-305-0956.

  
Jay M. Patidar  
Primary Examiner  
Tech Center 2862  
February 21, 2001